

(19) 世界知识产权组织
国际局



(43) 国际公布日:

2004年3月18日(18.03.2004)

PCT

(10) 国际公布号:

WO 2004/022932 A1

(51) 国际分类号: F01N 1/08, F04C 29/06, F04B 39/00, 53/00

(21) 国际申请号: PCT/CN2003/000689

(22) 国际申请日: 2003年8月19日(19.08.2003)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权: 02128462.8 2002年9月8日(08.09.2002) CN

(71)(72) 发明人/申请人: 章国标(ZHANG, Guobiao)
[CN/CN]; 中国浙江省绍兴市城东长诏路8#-8#车库,
Zhejiang 312000 (CN).

(74) 代理人: 上海专利商标事务所(SHANGHAI PATENT
& TRADEMARK LAW OFFICE); 中国上海市桂平
路435号, Shanghai 200233 (CN).

(81) 指定国(国家): AE, AG, AL, AM, AT, AU, AZ, BA,
BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE,

DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL,
PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW

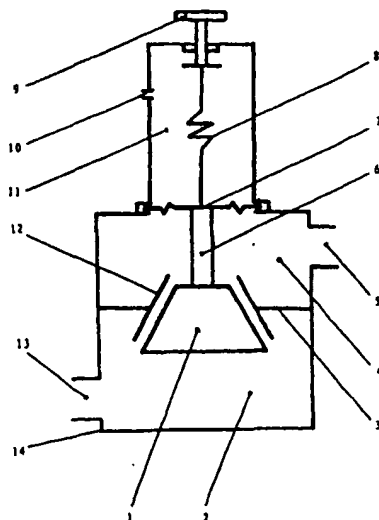
(84) 指定国(地区): ARIPO专利(GH, GM, KE, LS, MW,
MZ, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT,
BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB,
GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI专利(BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG)

本国际公布:
— 包括国际检索报告。

所引用双字母代码和其它缩写符号, 请参考刊登在每期
PCT公报期刊起始的“代码及缩写符号简要说明”。

(54) Title: MUFFLER

(54) 发明名称: 消声器



(57) Abstract: A muffler is disclosed. In the muffler a throttling device which is controlled by the energy of the airflow to be muffled is provided in a pipeline of the airflow which needs to be muffled. The muffler is adjusted by itself according to random variety of the pulsing airflow, and can eliminate or reduce effectively the pulsation of the airflow and the related noise in the range of the low frequency and the middle frequency. The muffling effect of the muffler has no correlation with the volume of the muffler, and therefore the volume of the muffler can be reduced.

[见续页]

Rec'd PCT/PTO 07 MAR 2003

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN03/00689

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ F01N1/08 F04C29/06 F04B39/00 F04B53/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ F01N1/08 F01N1/00 F01N5/00 F01N5/02 F01N5/04 F04B39/00 F04B53/00 F04C29/06 F04C29/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CHINESE INVENTION 1985-2003, CHINESE UTILITY MODEL 1985-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DATABASES: WPI PAJ EPODOC

KEYWORDS: silencer muffler thrott+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP5086834A (TOYOTA MOTOR CORP) 06.Apr.1993 (06.04.93)	1
X	JP58217714A (TOYODA JIDO SHOKKI SEISAKUSHO KK) 17.Dec.1983 (17.12.83)	1
X	JP11013451A (HITACHI CONSTR MACH CO LTD) 19.Jan.1999 (19.01.99)	1
X	JP8042321A (KUBOTA CORP) 13.Feb.1996 (13.02.96)	1
X	US3884664A (ROVAC CORP) 20.May.1975 (20.05.75)	1

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
23.Oct.2003 (23.10.03)

Date of mailing of the international search report

13 NOV-2003 (13.11.03)

Name and mailing address of the ISA/CN
6 Xitucheng Rd., Jimen Bridge, Haidian District,
100088 Beijing, China
Facsimile No. 86-10-62019451

Authorized officer

Telephone No. 86-10-62085391

From the INTERNATIONAL BUREAU

PCTNOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To:

SHANGHAI PATENT & TRADEMARK LAW OFFICE
435 Guiping Road
Shanghai 200233
CHINEDate of mailing (day/month/year)
18 March 2004 (18.03.2004)Applicant's or agent's file reference
034709 PC**IMPORTANT NOTICE**International application No.
PCT/CN2003/000689International filing date (day/month/year)
19 August 2003 (19.08.2003)Priority date (day/month/year)
08 September 2002 (08.09.2002)

Applicant

ZHANG, Guobiao

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this notice:

AU, AZ, BY, CH, CO, DZ, EP, HU, JP, KG, KP, KR, MD, MK, MZ, RU, TM, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

AE, AG, AL, AM, AP, AT, BA, BB, BG, BR, BZ, CA, CR, CU, CZ, DE, DK, DM, EA, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this notice is a copy of the international application as published by the International Bureau on 18 March 2004 (18.03.2004) under No. WO 2004/022932

4. **TIME LIMITS** for filing a demand for international preliminary examination and for entry into the national phase

The applicable time limit for entering the national phase will, subject to what is said in the following paragraph, be **30 MONTHS** from the priority date, not only in respect of any elected Office if a demand for international preliminary examination is filed before the expiration of **19 months** from the priority date, but also in respect of any designated Office, in the absence of filing of such demand, where Article 22(1) as modified with effect from 1 April 2002 applies in respect of that designated Office. For further details, see *PCT Gazette* No. 44/2001 of 1 November 2001, pages 19926, 19932 and 19934, as well as the *PCT Newsletter*, October and November 2001 and February 2002 issues.

In practice, time limits other than the 30-month time limit will continue to apply, for various periods of time, in respect of certain designated or elected Offices. For regular updates on the applicable time limits (20, 21, 30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

For filing a demand for international preliminary examination, see the *PCT Applicant's Guide*, Volume I/A, Chapter IX. Only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination (at present, all PCT Contracting States are bound by Chapter II).

It is the applicant's sole responsibility to monitor all these time limits.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Gijsbertus Beijer - Carlos Roy

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.91.11